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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,531	02/06/2004	Naozumi Arimoto	8305-235US (NP146-1)	6798
570 7590 09/26/2007 AKIN GUMP STRAUSS HAUER & FELD L.L.P. ONE COMMERCE SQUARE 2005 MARKET STREET, SUITE 2200 PHILADELPHIA, PA 19103			EXAMINER MCAVOY, ELLEN M	
			ART UNIT 1764	PAPER NUMBER
			MAIL DATE 09/26/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/773,531

Applicant(s)

ARIMOTO, NAOZUMI

Examiner

Ellen M. McAvoy

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 September 2007 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watts et al (6,121,209) in combination with Ichihashi et al (5,792,731).

Applicant's arguments filed 05 October 2006 have been fully considered but they are not persuasive. As previously set forth, Watts et al ["Watts"] disclose lubricating oil compositions suitable for use in automatic transmissions which comprise a major amount of lubricating oil and minor amounts of (A) a phosphoric acid-containing compound and (B) an ashless antioxidant. Watts teaches that the preferred range of component (A) corresponds to approximately 0.02 to 0.04 mass percent phosphorus in the oil. See column 3, lines 6-13. Watts teaches that desirably a source of boron is present in the oil composition which may be present in the form of borated

dispersants, borated amines, borated alcohols, borated esters or alkyl borates. See column 3, lines 14-20. Applicant's invention differs by adding calcium-based additives and at least one sulfur-based additive selected from dithiocarbamates other than metal dithiocarbamates, dithiophosphates other than metal dithiophosphates, trithiophosphites, polysulfides and derivatives thereof. However, Watts also allows for the addition of one or more additives to form a fully formulated lubricating oil composition including extreme pressure agents and detergents. Amounts of the various additives which may be added to the lubricant composition are cited in the Table in column 3 of Watts. Ichihashi et al ["Ichihashi"] is added to teach that sulfur-based extreme pressure additives and alkaline-earth metal-based detergents are conventional additives to lubricating oil compositions suitable for use in transmissions. Suitable sulfur-based extreme pressure additives include olefin polysulfides, dihydrocarbyl polysulfides and thiocarbamates. Ichihashi teaches that the sulfur-based additives may be added to the transmission fluid in an amount of about 0.05 to 5 weight %. See column 3, lines 1-54. The alkaline earth metal based detergent includes sulfonates, phenates, salicylates and phosphates, and that calcium phenate is preferred. The detergents may be added to the transmission fluid in an amount of 0.05 – 8 weight %. See column 5, top. Having the prior art references before the inventors at the time the invention was made it would have been obvious to the skilled artisan to have added the sulfur-based extreme pressure additives and alkaline-earth metal-based detergents of Ichihashi to the lubricating oil compositions of Watts if so desired. The examiner is of the position that the transmission compositions of Watts in combination with Ichihashi meet the limitations of the above rejected claims. Although mass ratios of phosphorus : calcium : boron :

sulfur are not specifically set forth, the amounts set forth for compounds containing each of these elements result in lubricant compositions meeting the claimed ratio.

***Claim Rejections - 35 USC § 103***

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloch et al (5,443,744) in combination with Ichihashi et al (5,792,731).

As previously set forth, Bloch et al ["Bloch"] disclose lubricating oil compositions which are suitable as automatic transmission fluids containing a base oil and the reaction product of a phosphating agent and a thioalcohol. Bloch teaches that the reaction product may be added to the base oil in an amount corresponding to approximately 0.02 to 0.04 mass percent phosphorus in the oil. See column 4, lines 37-44. Bloch teaches that a boron source such as borated dispersants, borated amines, borated alcohols, borated esters or alkyl borates may be added, and that a molar ratio of boron to the phosphorus in the reaction product (B/P) is preferably 0.5 to 2.0. See column 4, lines 45-52. Applicant's invention differs by adding calcium-based additives and at least one sulfur-based additive selected from dithiocarbamates other than metal dithiocarbamates, dithiophosphates other than metal dithiophosphates, trithiophosphites, polysulfides and derivatives thereof. However, Bloch also allows for the addition of one or more additives to form a fully formulated lubricating oil composition including extreme pressure agents and detergents. Amounts of the various additives which may be added to the lubricant composition are cited in the Table in column 5 of Bloch. Ichihashi et al ["Ichihashi"] is added to

teach that sulfur-based extreme pressure additives and alkaline-earth metal-based detergents are conventional additives to lubricating oil compositions suitable for use in transmissions. Suitable sulfur-based extreme pressure additives include olefin polysulfides, dihydrocarbyl polysulfides and thiocarbamates. Ichihashi teaches that the sulfur-based additives may be added to the transmission fluid in an amount of about 0.05 to 5 weight %. See column 3, lines 1-54. The alkaline earth metal based detergent includes sulfonates, phenates, salicylates and phosphates, and that calcium phenate is preferred. The detergents may be added to the transmission fluid in an amount of 0.05 – 8 weight %. See column 5, top. Bloch teaches that the metal in the detergent component is present in the composition in a metal to phosphorus molar ratio (M/P) of 0.005 to 0/5. See column 5, lines 27-44. Having the prior art references before the inventors at the time the invention was made it would have been obvious to the skilled artisan to have added the sulfur-based extreme pressure additives and alkaline-earth metal-based detergents of Ichihashi to the lubricating oil compositions of Bloch if so desired. The examiner is of the position that the transmission compositions of Bloch in combination with Ichihashi meet the limitations of the above rejected claims. Although mass ratios of phosphorus : calcium : boron : sulfur are not specifically set forth, the amounts set forth for compounds containing each of these elements result in lubricant compositions meeting the claimed ratio.

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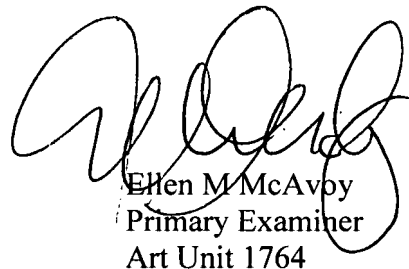
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451.

The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M. McAvoy  
Primary Examiner  
Art Unit 1764

EMcAvoy  
September 19, 2007